

WE CLAIM:

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1. An aqueous adhesive composition comprising:
(a) from about 5 to about 75 weight % of an aqueous suspension of polymeric acrylate microspheres;
5 (b) from about 25 to about 95 weight % of an aqueous emulsion of crosslinked acrylate polymer; and optionally,
(c) a functionally effective amount of one or more auxiliary ingredients for modifying coating or enhancing adhesive performance properties;
10 wherein the weight ratio, on a solids basis, of microspheres to crosslinked acrylate polymer is about 0.025:1 to about 1.9:1.
2. The composition of claim 1 comprising about 40 to about 75 weight % of said aqueous suspension of
15 polymeric acrylate microspheres and about 25 to about 60 weight % of said aqueous emulsion of crosslinked acrylate polymer.
3. The composition of claim 1 wherein the weight ratio, on a solids basis, of microspheres to
20 crosslinked acrylate polymer is about 0.03:1 to about 1.6:1.
4. The composition of claim 1 wherein said polymeric acrylate microspheres are solid.
5. The composition of claim 4 wherein said
25 polymeric acrylate microspheres are produced by the process comprising:
- (a) contacting a polymerizable aqueous emulsion of at least one non-ionic monomer of an alkyl acrylate or alkyl methacrylate ester of a non-tertiary
30 alcohol and at least one ionic monomer copolymerizable with said non-ionic monomer and at least one non-free radically polymerizable acid; and
- (b) polymerizing the emulsion to form an aqueous suspension of said solid polymeric pressure
35 sensitive adhesive microspheres;

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6. wherein said non-free radically polymerizable acid is contacted with said polymerizable aqueous emulsion prior to achieving about 95% conversion of said non-ionic monomer.

6. The composition of claim 1 wherein said polymeric acrylate microspheres are hollow.

7. The composition of claim 1 wherein said crosslinked acrylate polymer has a T_g of about -10°C to about -50°C .

10 8. The composition of claim 1 wherein said auxiliary ingredients are selected from surfactants, defoaming agents, viscosity modifiers, neutralizing agents, flow control agents, stabilizers or tackifying agents.

15 9. The composition of claim 8 wherein said aqueous adhesive composition contains at least one surfactant, at least one defoaming agent, at least one viscosity modifier, and at least one neutralizing agent.

20 10. The composition of claim 1 wherein the polymerized monomers of said polymeric acrylate microspheres comprises (a) about 85 to about 99.5 weight percent of at least one alkyl acrylate or alkyl methacrylate ester of a non-tertiary alcohol, wherein said alkyl group has from 4 to about 14 carbon atoms, and
25 (b) about 0.5 to about 15 weight percent of an alkali metal, ammonium or amine salt of an acid selected from a monoolefinic monocarboxylic acid, a monoolefinic dicarboxylic acid or mixtures thereof.

30 11. The composition of any of claims 1, 5, 7 or 10 having dry film peel value of about 0.2 to about 2.5 pounds per inch peel force on stainless steel with adhesive failure mode.

35 12. An article comprising a face stock material having coated thereon a removable or repositionable, pressure sensitive adhesive composition comprising: (a)

polymeric acrylate microspheres, (b) crosslinked acrylate polymer, and, optionally, (c) a functionally effective amount of one or more auxiliary ingredients for modifying coating or enhancing adhesive performance properties; wherein the weight ratio of microspheres to crosslinked acrylate polymer is about 0.025:1 to about 1.9:1.

13. The article of claim 12 wherein the weight ratio, on a solids basis, of microspheres to crosslinked acrylate polymer is about 0.03:1 to about 1.6:1.

10 14. The article of claim 12 wherein said polymeric acrylate microspheres are solid.

15 15. The article of claim 14 wherein said polymeric acrylate microspheres are produced by the process comprising:

15 (a) contacting a polymerizable aqueous emulsion of at least one non-ionic monomer of an alkyl acrylate or alkyl methacrylate ester of a non-tertiary alcohol and at least one ionic monomer copolymerizable with said non-ionic monomer and at least one non-free
20 radically polymerizable acid; and

(b) polymerizing the emulsion to form an aqueous suspension of said solid polymeric pressure sensitive adhesive microspheres;

25 wherein said non-free radically polymerizable acid is contacted with said polymerizable aqueous emulsion prior to achieving about 95% conversion of said non-ionic monomer.

16. The article of claim 12 wherein said polymeric acrylate microspheres are hollow.

30 17. The article of claim 12 wherein said crosslinked acrylate polymer has a T_g of about -10°C to about -50°C .

18. The article of claim 12 wherein said auxiliary ingredients are selected from surfactants,
35 defoaming agents, viscosity modifiers, neutralizing

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Docket No.: 393325

Express Mail Label No.: EL846917970US

agents, flow control agents, stabilizers or tackifying agents.

19. The article of claim 18 wherein said aqueous adhesive composition contains at least one surfactant, at least one defoaming agent, at least one viscosity modifier, and at least one neutralizing agent.

20. The article of claim 12 wherein the polymerized monomers of said polymeric acrylate microspheres comprises (a) about 85 to about 99.5 weight percent of at least one alkyl acrylate or alkyl methacrylate ester of a non-tertiary alcohol, wherein said alkyl group has from 4 to about 14 carbon atoms, and (b) about 0.5 to about 15 weight percent of an alkali metal, ammonium or amine salt of an acid selected from a monoolefinic monocarboxylic acid, a monoolefinic dicarboxylic acid or mixtures thereof.

21. The article of any of claims 12, 15, 17 or 20 having dry film peel value of about 0.2 to about 2.5 pounds per inch peel force on stainless steel with adhesive failure mode.